

LONG DURATION ENERGY STORAGE STUDY OFFICE HOURS

Thank you for joining us today. Section 80 of the 2022 Climate Bill (H5060) includes requirements for a Long Duration Energy Storage Study.

- DOER, in consultation with MassCEC, shall conduct a study
 - optimize the cost-effective deployment and utilization of both new and existing mid-duration and long-duration energy storage systems
 - investigate the necessity, costs and benefits of conducting energy storage systems solicitations and procurements of up to 4,800 gigawatt hours of stored energy from renewable generation delivered to periods of high demand each year, and any other methods
 - the state of energy storage systems currently in development
 - the cost effectiveness of providing tax incentives
 - the cost effectiveness of financing mechanisms and incentives
 - the location patterns of energy storage systems currently in use
 - opportunities for future expansion in energy storage
- Submit report to TUE on December 31, 2023
 - extent to which the storage systems contribute to compliance with the statewide greenhouse gas emissions limits and sublimits
 - the integration of offshore wind energy and other renewable sources
 - enable firm energy delivery from renewable energy resources during periods of low energy demand to periods of high energy demand
 - enhance the reliable delivery and security of electricity to consumers
 - minimize ratepayer costs
 - contribute to the decarbonization and operational resilience of critical emergency infrastructure
 - contribute to the decarbonization of healthcare institutions

Energy Storage Definition

Energy storage system is defined in MGL 164 section 1 as:

- a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy and which may be owned by an electric distribution company; provided, however, that an energy storage system shall:
 1. reduce the emission of greenhouse gases;
 2. reduce demand for peak electrical generation;
 3. defer or substitute for an investment in generation, transmission or distribution assets; or
 4. improve the reliable operation of the electrical transmission or distribution grid; and provided further, that an energy storage system shall:
 5. use mechanical, chemical or thermal processes to store energy that was generated for use at a later time;
 6. store thermal energy for direct heating or cooling use at a later time in a manner that avoids the need to use electricity at that later time;
 7. use mechanical, chemical or thermal processes to store energy generated from renewable resources for use at a later time; or
 8. use mechanical, chemical or thermal processes to capture or harness waste electricity and to store the waste electricity generated from mechanical processes for delivery at a later time.

For reference, the following definitions from Section 83B for Clean energy procurements:

- “Long-duration energy storage system”, an energy storage system, as defined in section 1 of chapter 164 of the General Laws, that is capable of dispatching energy at its full rated capacity for a period greater than 10 hours.
- “Mid-duration energy storage system”, an energy storage system, as defined in section 1 of chapter 164 of the General Laws, that is capable of dispatching energy at its full rated capacity for a period greater than 4 hours and up to 10 hours.

Feedback on Project Scope

DOER and MassCEC are seeking feedback of the scope of the Section 80 Storage Study to begin the study development

- Do you have feedback on the scope of the final report? Are there any objectives that the final study should include?
- Do you have any feedback on the methodology or evaluation necessary to complete the study?
 - Are there any data sets you are aware of that DOER and MassCEC should utilize in the study?
 - Are there partners or stakeholders that should be interviewed as part of the study?
 - Do you have any feedback on potential stakeholder processes to achieve the study objectives?
- Do you have any other additional feedback?

Written Feedback

- Please send written feedback to:
 - grid@masscec.com and
Aurora.Edington@mass.gov
- Please send written feedback by COB on November 10
- Slides and a link to the legislation will be provided to all office hours participants